

## TWINCORE / SFB 900 - Seminar

Tuesday March 26<sup>th</sup>, 2019, 5 p.m.

TWINCORE Lecture Hall 0.020

# Can Broadly Neutralizing Antibodies Lead Us to an HCV Vaccine?



### Justin Bailey, MD, PhD

Hepatitis C virus (HCV) infects over 71 million people worldwide and kills more people in the United States annually than HIV. Direct-acting antiviral (DAA) therapy has revolutionized care, but development of a vaccine for HCV remains essential for disease eradication. The enormous genetic diversity of HCV makes this a daunting challenge. Early development of broadly-neutralizing antibodies is associated with spontaneous clearance of HCV infection, but the mechanisms of immune-mediated clearance are poorly defined. We have isolated broadly neutralizing monoclonal antibodies (bNAbs) from individuals who cleared HCV infection, and studied how these antibodies can drive viral evolution, leading to a loss of replicative fitness. We are also studying the structural interactions between these bNAbs and HCV envelope proteins to identify conserved binding epitopes and antibody features critical for neutralizing breadth, with the goal of informing HCV vaccine development.

### Who is Justin Bailey?

Dr. Justin Bailey is an Associate Professor of Medicine and an Infectious Diseases physician at the Johns Hopkins University School of Medicine in Baltimore, Maryland. He earned his M.D. and Ph.D. degrees from Johns Hopkins and completed medical residency training at Massachusetts General Hospital in Boston, Massachusetts. His laboratory focuses on virus-host interactions, with a particular focus on broadly neutralizing antibodies against hepatitis C virus (HCV).